



STATE OF CALIFORNIA

ELECTRICITY OVERSIGHT BOARD

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The Electricity Oversight Board (EOB) has reviewed the recently circulated Electricity Infrastructure Assessment, staff report and Natural Gas Assessment, staff report. The recent staff reports are the intended precursors to the Transmission White Paper and the Electricity and Natural Gas Report, to be released concurrently on July 25, and ultimately, the Integrated Energy Policy Report (IEPR), due to the legislature in November 2003.

The EOB again provides comments to Commission staff in an effort to assist in the development of a comprehensive and accurate Report for the legislature. The EOB continues to have concerns regarding a few elements of the recent reports. General comments on the Electricity Infrastructure Assessment (EIA) are provided below, followed by identification of specific statements or conclusions in the EIA of particular concern to the EOB.

In General

- Some Input Assumptions Would More Appropriately Be Considered Output Opinions/Conclusions Of The Final Report
- Staff's Assessments Should Not Express A Policy Opinion Or Directive
- Report Contains Unsubstantiated And Over-Reaching Comments
- Additional Details Needed For MarketSym Modeling

The report still lacks important details regarding the MarketSym modeling. For example, there is no mention of the assumptions used for market structure or bidding behavior of sellers that is used to generate spot price predictions.

- Report Needs Consistent Conclusions For Relationship Between Spot Market Prices And Investment Decisions

A clearer and more consistent treatment of the interactions between current spot prices and investment decisions is necessary. In some places the text of the report explicitly indicates that expectations of future prices drive investments, while in other places text suggests that current prices drive investment.

It is the EOBs opinion that current investment decisions are based almost entirely on expectations of future revenue streams derived from negotiated long term contracts. These contract prices will be influenced by the price expectations of load serving entities

and generation developers, under the assumption that the new infrastructure being considered is operational.

The prices reported in the staff report could be consistent with this approach. However, under this approach generation developers would have good estimates of future revenue projections as a result of the contract terms. Therefore generation investments would still be made in the absence of “high” spot prices, in the current period or in the future because the spot market would not be relied upon to recover fixed costs.

Specific Comments

- **Nothing Provided Supports The Claim That Spot Market Prices Are Competitive**

Wholesale spot market prices in California have been competitive since July, 2001, as evidenced by Figure 4 and in the ISO’s monthly market analysis. *Current Conditions in the California Electricity Market*, Page 4.

The EOB will not comment on whether or not recent prices are competitive, because of on-going litigation. Nonetheless, statements regarding competitive prices must be supported and verifiable. However, figure 4 is a graph of peak and off peak prices not compared to any data that supports a claim that prices are competitive. In addition, no citation is provided wherein the ISO indicates that prices are competitive, and based on a cursory review of the DMA Market Analysis Report for April 2003 (<http://www.caiso.com/docs/09003a6080/22/8b/09003a6080228bbd.pdf>), the EOB is unable to find any ISO statements that describe prices as competitive. Furthermore, page 8 of the Assessment seems to suggest that the opposite is true; “Bidders failed the AMP conduct test in 33 distinct hours in April, compared to 135 hours in March”.

- **Spot Markets Stabilized Because of Regulatory Relief**

The stabilization of the spot market for electricity in California has been largely the result of three factors:...

...The combined effect of the capacity additions and reduced demand is an increase in the state’s dependable reserve capacity.... *Current Conditions in the California Electricity Market*, Page 5.

The Governor and Legislature did not claim that it was a lack of dependable capacity in California and the West that caused problems during the crisis. Rather, California claimed that a lack of energy offered to the California market from what otherwise should have been dependable capacity was insufficient to meet demand in most hours.

While the EOB does not deny that conservation, smaller spot market exposure due to long term contracts, and new generation capacity contributed to the stabilization of the

spot market, conspicuous in its absence from the list of reasons for the stabilization of the California market is any mention of the regulatory relief eventually given to California and the ISO by the FERC. In particular, the must offer rule and AMP which are intended to prevent physical and economic withholding of otherwise dependable capacity. The EOB feels that these and other regulatory tools eventually provided by FERC were the most direct cause of the initial stabilization of the market.

- Reserve Margins Do Not Dictate Spot Market Prices

Dependable reserve capacity in California and the remainder of the WECC is at levels not seen since the late 1980's. The size of this reserve margin, combined with the relatively small reliance on spot markets to meet demand leads staff to conclude that spot markets should yield reasonable prices during the next three years. *Supply-Demand Balance in 2004-2006*, Page 8.

- Capacity Surplus, Low Forward Prices, Incentives To Generation Investment

Investment in new generation capacity in California has slowed during the past 18 months for several interrelated reasons:

Large amount of new capacity... and conservation... have resulted in a capacity surplus and low forward prices...

Unsettled regulatory issues have affected the projected revenue streams from new facilities.

These include:

the possible imposition of price caps in wholesale electricity markets, . . .
the inability, to date, of IOUs in California to sign long-term contracts for energy and capacity *Delays and the Completion of Permitted Plants*, Page 8.

The EOB is uncomfortable with the assertion that there is currently a surplus of capacity available to serve California load. While there may be adequate physical capacity in the west to serve western loads, the EOB is aware of several contingencies that could result in significant amounts of capacity being withdrawn from California markets. If this happened, California could experience local shortages notwithstanding the overall level of western capacity.

The EOB believes that low forward prices are in fact a good thing, and high forward prices do not necessarily provide an incentive for new generation.

Furthermore, the EOB does not believe it is appropriate to suggest that the price caps that have been allowed by FERC are significant obstacles to generation investment. Further, it is the revenue stream associated with long-term contracts that will drive investments.

Finally, IOUs were in the past unable to enter into long-term contracts, but pursuant to recent CPUC Orders, IOUs can now enter into long-term contracts. There are of course other practical reasons why the IOU's do not enter in to long-term contracts, including credit rating, but currently the IOU's have the ability.

- Must Identify Industry Analysts

The amount of dependable capacity added in California and the remainder of the WECC, relative to observed and forecasted changes in peak demand during 200-2005 has been substantial. Moreover, the share of peak load for which energy and capacity has already been encumbered is in excess of 90 percent statewide. The increasing reserve margins and reduced dependence on the spot market jointly facilitate competitive spot market prices. **Industry analysts** agree that substantial amounts of capacity chasing a dramatically reduced amount of demand in spot markets has been a significant contributing factor in the price outcomes observed during the past twenty-one months. *Supply-Demand Balance in 2004-2006*, Page 9.

This Report will have a broad audience. Assumptions, facts, and conclusions have the potential to affect energy policy decisions in California. Understanding the source of information allows the reader to better assess the bias of the source as well as the information presented, therefore the industry analyst should be cited.

- Reserve Margins Do Not Ensure Competition and Reliability

Current and anticipated **reserve margins**, given the reduced share of power being purchased in the spot market, **should ensure** reliability and **competitive spot markets during** 2004-2006, even in the absence of substantial merchant development (**emphasis added**).

The Assessment still suggests that reserve margins ensure competition and reliability. To paraphrase a statement made by Dr. Frank Wolak of the ISO MSC as part of a presentation during the June 6 ISO Board meeting, "if all capacity is owned by a single generator there will not be competition." Available capacity and associated reserve margins alone do not ensure anything. Particularly in a market such as California's that has significant issues with locally constrained areas.

- Long-Term Contracts, Not Spot Market Prices, Tied to Investment Decisions
Baseline electricity System Simulation Result, Page 14

Again, the EOB strongly believes that long-term contracts and not spot market prices are primary drivers of investment decisions. The Assessment continues to imply that spot market sales play a larger role in investment decisions than is appropriate. Should the Staff continue to assert that spot market prices are related to investment decisions, then Staff must explain their belief as to how spot prices are related to investment decisions.

- Whether Spot Market Sales Pay For New Generation Is Not A Factor In Determining Whether The Physical System Is Adequate

In evaluating baseline system performance, we look at whether the system can meet demands, whether key transmission lines are constrained, and whether residual energy sold in the spot market would pay for new generation. These are three key indicators of whether the physical system is adequate. *Baseline electricity System Simulation Result, Page 14*

The EOB believes that the first two factors are sufficient to determine whether the physical system is adequate. There is truly no need to use assessments of spot market sales because spot market prices do not necessarily pay for new generation.

- High Spot Prices Do Not Necessarily Facilitate Merchant Investment

Projected spot prices serve as a benchmark for the value of new generation. The terms of future long-term contracts will be influenced by current and projected spot market prices. Investment will depend upon expectations regarding market rules, the size of the spot market, degrees of uncertainty, etc. Staff does not assert that high spot market prices must be allowed to foster investment in generation, nor does staff even suggest that high spot market prices should be allowed to increase to encourage investments. Staff merely asserts that high spot prices would facilitate merchant investment. *Baseline electricity System Simulation Result, Page 14*

This excerpt highlights what EOB feels is an unclear treatment of the relationship between spot prices and investment decisions. In order for the last sentence to be true, there would have to be an expectation that the new investment would not result in downward pressure on future spot price expectations. Otherwise the new investment would never earn those high prices. If the report is going to claim that high spot prices will facilitate investment, staff should explicitly indicate if they are suggesting current spot prices will induce generation investment speculating on cost recovery from future

spot market activities and what impact they anticipate investment will have on those prices. The EOB realizes this can be difficult to describe since the Assessment covers a lengthy time horizon, however the lengthy time horizon also makes it difficult to interpret what cursory statements such as “high spot prices would facilitate merchant investment”, are intended to mean in terms of the timing assumed or what is being held constant versus assumed to have changed.

- Reserve Margin Input Must Be Identified; Justification For 1998-99 Levels Must Be Made

The set of resource additions and retirements assumed for California and the remainder of the WECC during 2007-2013 is presented in Appendix F. These do not include capacity added in response to the Renewable Portfolio Standard; this is presented in Appendix G. Resources were added in California and elsewhere so as to bring reserve margins down to 1998-1999 levels. Staff believes that these levels are sufficient in a market where a majority of demand is served by firm contracts of various durations to provide reliable service. *Input Assumptions*, Page 18.

Why were 1998-99 reserve margin levels chosen by Staff? What were the reserve margin levels in 1998-99? Do the 1998-99 levels provide a good basis for comparison with levels from other volatile years? Do 1998-99 reserve margin levels allow the simulations to accomplish a particular goal or to compare a particular year to high growth/low growth or high hydro versus low hydro?

- Future Spot Price Sparksreads Not Important To Long-Term Decision Making

Prices rise during 2007-2013, due to both declining reserve margins and increasing gas prices. The sparkspread in 2013 is roughly \$10 (based on a gas price of \$5.70 and a heat rate of 7,100 Btu), indicating that spot market revenues alone would not be sufficient to warrant construction of baseload capacity in the interim. This is an emerging issue that will need to be addressed as reserve margins decline during the next few years. *Simulation Results*, Page 19.

This paragraph could be interpreted as suggesting spot price sparksreads higher than \$10 are needed to warrant construction of baseload capacity. If debt repayment is covered by long-term contract revenues and capacity payments, expectations of future spot price sparksreads are of little importance in long term decision making, and current sparksreads are irrelevant to long-term investment decisions. If the intent is to infer that expectations of future sparksreads will influence the prices negotiated under long-term contracts, that relationship should be explicitly stated.

- Outlook For Future Prices Influence Fixed Price Contracts

... As these [DWR] contract[s] expire, prevailing natural gas prices will drive the cost of replacing them. *Reliability, Risk, and Dependence on Natural Gas*, Page 21.

It is not clear in the context of the Assessment if “prevailing” refers to spot prices for current delivery or current expectations of future gas prices. The EOB believes that it is expectations of future prices that will drive the negotiations of fixed price contracts.

- Assessment Should Not Take A Policy Position

California policymakers cannot directly intervene in natural gas markets to reduce prices or their volatility. Regulation of the spot market falls under federal jurisdiction. State involvement in the storage of natural gas would require intervention on a substantial scale if it were to substantially reduce price volatility. Moreover, the private sector has responded quickly to recent changes in the natural gas industry that have increased the value of the storage by building new storage facilities and increasing the capacity of existing ones. *Reliability, Risk, and Dependence on Natural Gas*, Page 22.

Here, the Assessment seems to suggest a policy opinion as to whether the State or the private sector should deal with the issue of natural gas storage (i.e. for the state, “intervention on a substantial scale”; “the private sector has responded.”). The Assessment deters the state from getting involved. This could be an outcome of the final Report, but a policy opinion should not be an input.

- Reserve Margins Do Not Guarantee Supply Adequacy

Transmission can substitute for generation in ensuring reserve margins high enough to guarantee supply adequacy and reduce the likelihood of price spikes in the spot market. *Transmission, Supply Adequacy and Spot Market Prices*, Page 27.

The Assessment correctly asserts that high reserve margins reduce the likelihood of price spikes rather than ensuring competitive prices, however, reserve margins (measured at a statewide level) do not GUARANTEE supply adequacy, particularly not at a local level.

- Assessment Should Not Influence How Future Projects Are Presented

Projects with economic benefits may face opposition in permitting as not having been put forth in the context of a broader plan and considered in the context of broader, long term transmission planning including project alternatives. *Major Obstacles to the Development of Transmission*, Page 32.

Here, Staff suggests how future proposals should be drafted and presented for permitting approval from the state (i.e. “in the context of a broader plan”). In the future, if a generator proposed a project “in the context of a broader plan . . . [and] . . . considered long term transmission planning including project alternatives”, the generator might well assume that the project would be approved.

- Assessment Should Not Suggest A Preference For LMP Over The Status Quo

More detailed than the current zonal pricing method in use, it [LMP] more accurately reflects existing transmission constraints and thus provides better price signals for planning and investment in transmission projects and may help remove investment obstacles. *Facilitating Development of Transmission Resources*, page 33.

This comments suggests a strong desire for LMP. The EOB has not yet decided on the expected benefits to California of implementing LMP and does not believe that the state has publicly expressed an opinion in favor of LMP for the west. Moreover, the desire for LMP should not be an input assumption of the Assessment, but rather, an outcome determined by reasoned discussion and comprehensive analysis.

- State Policy Must Be Rationalized Through Comprehensive Analysis

In short, State policy needs to not only facilitate timely investment in generation, but would also promote economic efficiency in many instances if it directed where new facilities were built. *Coordinating Development of Electronic Generation and Transmission*, Page 34.

This is a significant policy statement that requires far more discussion and analytical support if it is to be accepted as a State Energy Policy. In addition, this statement suggests a policy directive, whereas, this Assessment should be evaluating the baseline numbers and simulation outcomes, not suggesting and/or influencing state energy policy.